

The role of geometry in magnetic reconnection

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Magnetic reconnection is arguably the most effective energy conversion and transport process in plasmas. Reconnection is subject to topological considerations in two ways. First, the process itself involves a change in topology of the combined plasma-magnetic field system. This change in topology transcends that of the magnetic field alone and accounts for flux transport relative to the motion of the plasma in the system under investigation. The second way topology is important to magnetic reconnection is through modifications of the diffusion/dissipation physics brought about by the structure of the reconnecting system. This presentation will present an overview and summary of both past and recent results pertaining to both aspects.